

**University of New England  
Cumberland County  
Portland, Maine  
A-111-71-G-M**

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**Departmental  
Findings of Fact and Order  
Air Emission License  
Amendment #1**

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

## **I. REGISTRATION**

### **A. Introduction**

1. University of New England (UNE) of Portland, Maine was issued Air Emission License A-111-71-F-M/R on August 8, 2000, permitting the operation of emission sources associated with their Westbrook College Campus.
2. UNE has requested an amendment to their license in order to remove three older boilers, and replace them with two new boilers. UNE has also removed the #6 fuel oil tank from their campus, and as a result, Boiler #1 will now fire natural gas only.

### **B. Emission Equipment**

UNE is authorized to operate the following equipment in addition to the equipment listed in Air Emission License A-111-71-F-M/R:

#### **Fuel Burning Equipment**

| <b><u>Equipment</u></b> | <b><u>Maximum<br/>Capacity<br/>(MMBtu/hr)</u></b> | <b><u>Maximum<br/>Firing Rate<br/>(gal/hr)</u></b> | <b><u>Fuel Type,<br/>% sulfur</u></b>   | <b><u>Stack #</u></b> |
|-------------------------|---|--|---|-----------------------|
| Boiler #2               | 2.93  | 20.9   | #2 fuel oil, 0.35%<br>natural gas, neg. | 2                     |
| Boiler #3               | 8.37  | 60.0   | #2 fuel oil, 0.35%<br>natural gas, neg. | 3                     |

Boilers #2, #3, and #4 from Air Emission License A-111-71-F-M/R are currently off-line, and shall be permanently disabled before the new boilers on this modification become operational. The natural gas furnace (formerly Boiler #5) shall now be referred to as Boiler #4.

C. Application Classification

This modification is determined to be a minor modification and has been processed as such.

## II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boilers #2 and #3

Boiler #2 has a maximum input capacity of 2.93 MMBtu/hr, and Boiler #3 has a maximum input capacity of 8.37 MMBtu/hr. Both boilers were manufactured and installed in 2001, and fire #2 fuel oil with a maximum sulfur content of 0.35% by weight. Since each boiler is rated at less than 10.0 MMBtu/hr, they are not subject to 40 CFR Part 60, Subpart Dc.

A summary of the BACT analysis for each of the pollutants is discussed below:

1. PM and PM<sub>10</sub> emission rates are based upon MEDEP Chapter 103 for Boiler #3, and AP-42 factors dated 9/98 for fuel oil combustion in units rated less than 100 MMBtu/hr for Boiler #2.
2. SO<sub>2</sub>, NO<sub>x</sub>, CO and VOC emission rates are based upon AP-42 factors dated 9/98 for fuel oil combustion in units rated less than 100 MMBtu/hr.

3. Visible emissions from each boiler shall not exceed 20% opacity on a six-minute block average basis.

C. Annual Emission Restrictions

UNE shall be restricted to the following annual emissions, based on a 12-month rolling total:

**Total Allowable Annual Emission for the Facility**  
(used to calculate the annual license fee)

| <u>Pollutant</u> | <u>Tons/Year</u> |
|------------------|------------------|
| PM               | 6.6              |
| PM <sub>10</sub> | 6.6              |
| SO <sub>2</sub>  | 6.3              |
| NO <sub>x</sub>  | 3.4              |
| CO               | 1.4              |
| VOC              | 0.2              |

**III. AMBIENT AIR QUALITY ANALYSIS**

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Based on the total facility emissions, UNE is below the emissions level required for modeling and monitoring.

**ORDER**

The Department hereby grants Air Emission License Minor Revision A-111-71-G-M, subject to the conditions found in Air Emission License A-111-71-F-M/R, in addition to the following conditions:

**The following shall replace conditions (16)(B) and (17) in Air Emission License A-111-71-F-M/R:**

- (16) B. Fuel use shall not exceed 8.76 million scf of natural gas per year based on a 12-month rolling total. Fuel use records shall be maintained on a monthly basis, in addition to the 12-month rolling total.
- (17) Visible emissions from Boiler #1 shall not exceed 10% opacity on a six-minute block average basis.

**Condition (21) from Air Emission License A-111-71-F-M/R shall be removed.**

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**The following are new conditions:**

- (25) Boilers #2 and #3
- A. Fuel use shall not exceed 250,000 gallons/yr #2 fuel oil with a maximum sulfur content of 0.35% by weight. Fuel use records shall be maintained on a monthly basis for both #2 fuel and natural gas, in addition to the 12-month rolling total. Fuel use records shall consist of fuel delivery receipts indicating percent sulfur content.
  - B. Visible emissions from each boiler shall not exceed 20% opacity on a six-minute block average basis.
  - C. Emissions shall not exceed the following:

| Equipment |          | PM   | PM <sub>10</sub> | SO <sub>2</sub> | NO <sub>x</sub> | CO   | VOC  |
|-----------|----------|------|------------------|-----------------|-----------------|------|------|
| Boiler #2 | lb/hr    | 0.05 | 0.05             | 1.04            | 0.42            | 0.11 | 0.01 |
| Boiler #3 | lb/MMBtu | 0.12 | -                | -               | -               | -    | -    |
|           | lb/hr    | 1.01 | 1.01             | 2.99            | 1.20            | 0.30 | 0.03 |

- (23) This amendment shall expire concurrently with Air Emission License A-111-71-F-M/R.

DONE AND DATED IN AUGUSTA, MAINE THIS                      DAY OF                      2001.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: March 5, 2001

Date of application acceptance: March 5, 2001

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by Elisha McVay, Bureau of Air Quality.